

INTRODUCTION

On May 30, 2001, a series of Method 5 emissions tests consisting of three 96 minute runs was performed at Shenandoah Manufacturing Co., Inc., 1070 Virginia Avenue, Harrisonburg, Virginia on the model A12-2G-VA cremator. The laboratory analysis of the collected samples was performed in the laboratory at Shenandoah Manufacturing.

Test and analytical procedures and calculations used are those published by the United States Environmental Protection Agency in 40 CFR 60, Appendix A, Methods 1 - 5. Method 9 was used for opacity evaluation.

These tests were performed to demonstrate that the A12-2G-VA cremator is designed to preheat and maintain secondary chamber temperature at 1400°F or more, that the cremator meets the particulate grain loading requirement of .10 gr/dscf corrected to 7% O₂ and all Visible Emission Evaluation requirements.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Randall D. Cullers", with a long horizontal line extending to the right.

Randall D. Cullers
Product and Test Engineer
Shenandoah Manufacturing Co., Inc.

TEST DATA SUMMARY

UNIT TESTED: A12-2G-VA

DATE TESTED: May 30, 2001

TEST NUMBER:

928	929	930	Average
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Sampling Parameters

Total Sampling Time, Min	96	96	96	96
Volume of Gas Sampled, dscf	32.3	32.6	36.0	33.6
Isokinetic Sampling, %	103	100	110	104
Auxiliary Fuel, cu.ft.	400	394	390	395

Stack Gas Parameters

Average Temperature, °F	1390	1435	1401	1409
Average Velocity, fps @ Stack Cond.	11.6	12.5	13.4	12.5
Average Flow Rate, acfm @ Stack Cond.	743	802	856	800
Average Flow Rate, dscfm	182	189	190	187
Moisture Content, Vol. %	11	12	19	14
CO ₂ Content, Vol. %	6.4	6.7	9.6	7.6
O ₂ Content, Vol. %	11.1	10.6	6.8	9.5
N ₂ and CO Content, Vol. %	82.6	82.7	83.7	83.0
CO Content, ppm	0	0	0	0

Particulate

Particulate Concentration, gr/dscf	.041	.017	.020	.026
Particulate Concentration, gr/dscf @7%O ₂	.058	.023	.020	.034
Particulate Emissions, lbs/hr	.064	.027	.033	.041
Particulate Emissions, lbs/100lbs.	.148	.063	.076	.096

Retention Time

928 - 3.356 cuft in secondary / 743 acfm/60s/m = .271 seconds
929 - 3.356 cuft in secondary / 802 acfm/60s/m = .251 seconds
930 - 3.356 cuft in secondary / 856 acfm/60s/m = .236 seconds

BURNING AND CHARGING RATES

Test No.	Burning Rate-lbs/hr.*	Charge Weight-lbs.
928	27	350
929	27	350
930	27	350

*Burning rate includes burn down time and subtracting the weight of the ash.